Please show all your work! Answers without supporting work will not be given credit. Write answers in spaces provided.

Name

1. [3 pts] Compute $\int \frac{8\sin(3x)}{\cos^6(3x)} dx$

Answer:____

2. [3 pts] Compute $\int \frac{6x}{\sqrt{x+1}} dx.$

Answer:____

3. [4 pts] An alien plant grows at the rate $H'(t) = \frac{1}{\sqrt[3]{8t+3}}$ inches per day, t days after it was planted. How many inches will the height of the plant change on the third day? (Round your answer to three decimal places.)

Answer:____